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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,842	01/11/2006	Jia-Ni Chu	W9643-02	3234

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EXAMINER	
CHRISTIE, ROSS J	

ART UNIT	PAPER NUMBER
1731	

MAIL DATE	DELIVERY MODE
12/08/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,842	CHU ET AL.	
	Examiner	Art Unit	
	ROSS J. CHRISTIE	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,11-14,17-20 and 23-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7, 11-14, 17-20 and 23-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application

The amendments/arguments filed on October 22, 2010 have been entered. Claims 1-7, 11-14, 17-20 and 23-26 are pending and presented for examination on the merits.

Claim Objections

1. Claims 1, 11 and 17 are objected to because of the following informalities: In the aforementioned claims, the second recitation of the "d_{10}" particle size in each claim is an apparent typographical error and should instead read "d_{90}" as disclosed in the present specification. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-7, 11-14, 17-20 and 23-26 rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,527,817 to Fang et al. (hereinafter "Fang") in view of United States Pre-Grant Patent Application Publication No. 2003/0198759 to Fruge et al. (hereinafter "Fruge").

Referring to Applicants' independent claims 1, 11, 17, 25 and 26, Fang et al. teaches a polishing composition and polishing method, said composition comprises 10-95 weight percent, based on the solids of abrasive particles (colloidal silica), wherein the abrasive particles have a polydispersed particle size distribution and water (abstract and column 2, line 62 - column 4, line 2). The standard deviation of the particles is also defined.

However, though the reference discloses the general conditions of the instant invention, it does not specifically disclose a span value by volume of the colloidal silica particles.

Fruge is drawn to a coating composition comprising colloidal silica (title). Specifically, Fruge discloses employing polydispersed colloidal silica with a preferred median particle size being in the range of 20 to 30 nm (instant claimed range is about 20 to about 100), with a span value, or 80% span value (d_{90}-d_{10}), preferably being 40 nm (instant claimed range is greater than or equal to 15 nm) (par. [0033]). Thus, as the entire range is within 100 nm, the fraction of particles greater than about 100 nm is 0%.

At the time of invention it would have been obvious to a person of ordinary skill in the art to produce the product/process of Fang including the claimed span value for the colloidal silica particles, in view of the teaching of Fruge. The suggestion or motivation for doing so would have been to provide an acceptable span value of the polydispersed colloidal silica particles required by the primary references of Fang but not disclosed.

Referring now to Applicants' claims 2-4, 12, and 18, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 15 nm. Furthermore, as the entire range is within 100 nm, the fraction of particles greater than about 100 nm is 0%.

Referring now to Applicants' claims 5, 13, and 19, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 18 nm. Furthermore, as the entire range is within 100 nm, the fraction of particles greater than about 100 nm is 0%.

Referring now to Applicants' claims 6, 14, and 20, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 20 nm. Furthermore, as the entire range is within 100 nm, the fraction of particles greater than about 100 nm is 0%.

Referring now to Applicants' claim 7, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 22 nm. Furthermore, as the entire range is within 100 nm, the fraction of particles greater than about 100 nm is 0%.

Referring now to Applicants' claim 23, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 25 nm.

Referring now to Applicants' claim 24, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 30 nm.

Response to Arguments

6. Applicant's arguments filed October 22, 2010 have been fully considered but they are not persuasive.

7. In response to applicant's argument that Fruge is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

The nature of the problem being solved by Fruge or type of art involved is irrelevant. Fruge is relied upon to teach the disclosure of an inherent characteristic of colloidal silica not explicitly taught by Fang. While teaching how to prepare CMP slurries using colloidal silica, Fang discloses certain properties of colloidal silica but not the span value. However, the span value of colloidal silica is an inherent property. And, Fruge discloses the span value of colloidal silica. Hence, when reading the combined teaching of Fang in view of Fruge, a person having ordinary skill in the art recognizes the colloidal silica utilized by Fang has the inherent characteristic of the span value taught by Fruge.

8. Accordingly, **THIS ACTION IS MADE FINAL. See MPEP 706.07(a)** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

9. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROSS J. CHRISTIE whose telephone number is (571)270-3478. The examiner can normally be reached on Monday-Friday 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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